

# Smart Sensors Gather Information for Machine Diagnostics



## *Stennis Space Center*

***Lion Precision  
St. Paul, Minnesota***

### **NASA Technology**

- ◆ Equipment failures at the E-Complex, home to three propulsion test stands at Stennis Space Center, are expensive
- ◆ To avert equipment failures and save thousands of dollars, Stennis considered smart sensors, which could report problems on the test stands

### **Partnership**

- ◆ Lion Precision partnered with Stennis through a Cooperative Agreement to develop a smart sensor
- ◆ As part of the agreement, the measurements were transmitted using MTConnect, a standard to integrate devices through a common interface
- ◆ Lion Precision produced sensors for the test stand and the partnership was the first implementation of the sensor protocols of MTConnect



### **Benefits**

- ◆ The same sensor is commercially available, and Lion Precision is incorporating the diagnostic capabilities into its next generation of sensors
- ◆ The company has used its NASA experience to create a battery-powered wireless device
- ◆ Future applications include the manufacturing or machining of metal parts